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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,243

06/14/2006

Jochen Schreiber

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05/12/2008

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EXAMINER

VANATTA, AMY B

ART UNIT

PAPER NUMBER

3765

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,243	Applicant(s) SCHREIBER ET AL.	
	Examiner Amy B. Vanatta	Art Unit 3765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the method of claims 1-9 in the reply filed on 1/28/08 is acknowledged. The traversal is on the ground(s) that an international or national stage application will have unity of invention if the claims are drawn only to a product and a process specially adapted for the manufacture of the product. In the present case, this is not found persuasive because the inventions lack the same special technical feature. As set forth in PCT Rule 13.2 and MPEP 1850, the requirement of unity of invention shall be fulfilled only when there is a technical relationship among the inventions involving one or more of the same or corresponding "special technical features". The "special technical feature" is the feature that defines a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. In the present case, the special technical feature of Group I of a stitch-bonded metallic fabric which is stitch-bonded by high energy water jets is not present in Group II. As to Group II, it is noted that a hydrodynamically needled nonwoven consisting of metal fibers is known, and thus it appears that the special technical feature is that this hydrodynamically treated nonwoven "consists at least partly of unspun metal fibers or filaments". This special technical feature is not present in Group I, which recites the use of spun yarns of metal fibers.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 10-20 are withdrawn as being drawn to nonelected inventions.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 5, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

In claim 1, line 6, the phrase "or the like" renders the claim indefinite because the claim includes elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

In claim 1, it is unclear how the high-energy water jets of lines 4-5 are related to the hydrodynamic needling of line 2. I.e., do the high-energy water jets perform the hydrodynamic needling? Also, it is unclear how the stitchbonding and/or finishing of line 4 relate to the hydrodynamic needling of line 2, i.e. it is unclear whether the stitchbonding or finishing by the high -energy water jets forms the hydrodynamic needling recited in claim 1.

In claim 7, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

In claim 7, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

In claims 7 and 8, "etc." renders the claims indefinite because the claims include elements not actually disclosed (those encompassed by "etc."), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim 7 is confusing in reciting the various types of fabrics in lines 2-4. It is unclear whether the material web is being claimed as comprising one of these fabrics, or in what manner these fabrics are related to the claimed material web. Also, it is unclear how these various fabrics are treated in the claimed method, and exactly what steps are being claimed in claim 7.

Also, claim 8 is confusing and the precise steps which are being claimed are not clear, specifically in terms of the recited variety of fabrics, and their relationship to the metal fiber nonwoven and the claimed processing steps. It is unclear whether the fabrics of lines 3-5 and the metal fiber nonwoven are being claimed as consisting of 100% metal fibers or of "combinations of metal fibers and textile fibers".

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1-4, 7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Rogers et al (US 5,380,580).

Rogers et al disclose a web which is treated by hydrodynamic needling, which forms a stitch-bonded web within the meaning the of present claims (col. 3, lines 12-18; col. 4, lines 6-8; col. 7, lines 20 and 46-47). The method includes finishing a material web by means of high-energy water jets to form a material web ready for use (see col. 7, lines 22-23 and 46-66; col. 8, lines 7-14). The material web which undergoes the hydroentanglement consists at least partly of metal fibers or metal filaments (col. 2, lines 17-22, particularly lines 20-22 disclosing the use of metal fibers; also see col. 5, lines 42-44). Textile fibers are mixed in the material web of metal fibers and both are together exposed to the hydrodynamic needling as in claim 4 (see col. 2, lines 20-22 disclosing "mixtures thereof", and/or the shot-free ceramic oxide fibers which are mixed with the metal fibers of col. 2, lines 20-22 form the claimed textile fibers). Regarding claim 7, a woven fabric is provided as the material web manufactured at least partly of metal fibers (col. 8, lines 43-52, and in particular lines 49 and 51), which undergoes water jet treatment. The water jet treatment by high energy water jets (col. 8, lines 7-11) inherently modifies various properties of the web, such as the density, as in claim 7. The water jet treatment is followed by processing/testing of the web on an Instron Tester (see Examples of Rogers), at least during testing procedures. The Instron Tester presses the web and calibrates it (via measuring), which forms a pressing and/or calibration process as in claim 9 (see, e.g., col. 10, lines 18-23).

Regarding claims 2 and 3, Rogers discloses that the mat may comprise high strength fiber consisting of metal fibers (col. 2, lines 17-20), and further teaches that the high strength fibers are typically available as yarns, usually twisted (col. 4, lines 23-24 and 26—7). Thus, it appears that Rogers teaches the use of high strength metal fibers in the form of yarns. Yarns which are twisted are “spun” to the extent recited in claims 2-3, and are not “unspun” as in claim 2. Rogers further teaches that the web of high strength fibers may be a woven mat (col. 8, line 49), as in claims 2-3.

7. Claims 1, 4, 5, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kyutoku et al (US 4,996,102).

Kyutoku et al disclose a web which is treated by a water jet loom to interlock the filaments or fibers (col. 3, lines 37-40), which forms a stitch-bonded web within the meaning the of present claims (col. 1, lines 58-63). The material web consists at least partly of metal fibers or metal filaments (i.e. stainless steel fibers disclosed in col. 1, lines 59-60 and col. 3, lines 21-23). The method includes finishing the material web by means of a water jet loom (col. 3, lines 39-40). A water jet loom has high-energy water jets as in claim 1.

In col. 2, lines 40-41, Kyutoku discloses that the carbon fiber layer may includes stainless steel fibers “incorporated within the carbon fiber layer”. In this embodiment, the carbon fibers form textile fibers which are mixed with the metal fibers (stainless steel) as in claim 4.

Kyutoku discloses that the composite may comprise a stainless steel layer and a carbon fiber layer (col. 1, lines 59-60; col. 2, lines 64-66), in which case the stainless steel fiber layer forms the web consisting of 100% metal fibers which is exposed to hydrodynamic needling as in claim 5 (also see col. 2, lines 42-60).

Regarding claim 8, Kyutoku discloses the use of a metal fiber nonwoven (col. 1, line 65-66) combined with various other layers (col. 2, lines 61-68; col. 3, lines 1-7) which are combined to form composites by means of hydrodynamic needling (col. 3, lines 39-40) as claimed.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al (US 5,380,580).

Rogers et al disclose a method as claimed, including hydrodynamic needling using high-energy water jets (col. 8, lines 7-11). Rogers discloses that the hydrodynamic needling is carried out at a pressure lower than that claimed, i.e. of 800 psi (col. 8, line 11), which is about 55 bar. Thus, the pressure is not greater than 200 bar, as in claim 6. It is within the ordinary skill in the art to determine the optimal pressure for the hydroentangling treatment of the web in the method of Rogers,

depending upon various considerations such as the thickness and density of the web, the processing speeds, and the desired end product characteristics. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use water jets having a pressure greater than 200 bar in the method of Rogers, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 571-272-4995. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Welch can be reached on 571-272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amy B Vanatta/
Primary Examiner
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